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Colorado, *Campostoma anomalum, catostomus commersoni, Cyprinella lutrensis, Fundulus zebrinus, Hybopsis gracilis, Ictalurus* (*melas, punctatus*), *Lepomis cyanellus, Notropis stramineus, Pimephales promelas, Rhinichthys cataractae* 659–674; *Micropterus salmoides* 1085–1090.

Comoros, *Lachneratus* n. gen. *phasmaticus* n. sp. 718–722.

Connecticut, *Carcharias taurus* 525–526.

Costa Rica, *Dendrobates pumilio* 723–730.

Cuba, *Eleutherodactylus atkinsi orientalis* = *a. estradai* 1138–1139.

Delaware, *Scyliorhinus retifer* 231–234.

East China Sea, *Apristurus herklotsi* 992–1002.

Ecuador, *Gladioglanis conquistador* n. sp. 190–209; *Eleutherodactylus petersi* = *petersorum* 1138–1139.

England, *Triturus v. vulgaris* 835–836.

Falkland Is., *Eknomoliparis* n. gen. *chirichignoae* n. sp. 358–373.

Fiji, *Lachneratus* n. gen. *phasmaticus* n. sp. 718–722.

Florida, Colubridae (16 spp.), Elapidae (1 sp.), Viperidae (3 spp.) 294–302; *Mugil cephalus* 485–492; Snakes (21 spp.) 517–521; *Nerodia fasciata* 638–659; *Notropis longirostris* 736–744; *Crystallaria asprella* 927–936; *Negaprion brevirostris* 942–953; *Sternotherus minor* 954–968; *Caretta caretta, Chelonia mydas* 1060–1069; *Caretta caretta* 1129–1132.

French Guiana, *Hypopomus pinnicaudatus* n. sp. 151–161.

Georgia, *Nerodia fasciata* 638–659; *Acipenser brevirostrum* 695–702; *Gambusia* (*affinis, holbrooki*) 1111–1116.

Hawaii, *Lachneratus* n. gen. *phasmaticus* n. sp. 718–722.

India, *Filimanus* (*similis* n. sp., *xanthonema*) 302–322.

Indian Ocean, *Lachneratus* n. gen. *phasmaticus* n. sp., *Rhabdamia*, Apogoninae (17 other genera) 718–722.

Indonesia, *Filimanus* (*perplexa* n. sp., *heptadactyla, hexanema, xanthonema*) 302–322.

Ireland, *Myxine ios* 1040–1043.

Israel, *Pterois miles, Fistularia commersonii* 230–231.

Italy, *Gambusia holbrooki* 730–735.

Java, *Acantopsis dialuzona* 910–915.
Kansas, *Gambusia affinis* 434–444; *Ambystoma tigrinum* 767–776.
Kentucky, *Etheostoma rafinesquei* 419–433; *Ambystoma barbouri* 687–694.
Louisiana, *Nerodia fasciata* 638–659; *Crystallaria asprella* 927–936.
Maine, *Raja erinacea* 339–347.
Malawi, *Pseudotropheus* (*pursus* n. sp., *lanisticola, livingstonii*) 141–147.
Malaysia, *Filimanus* (*similis* n. sp., *heptadactyla, xanthonema*) 302–322; *Acantopsis* (*octoactinotos* n. sp., *dialuzona*) 910–915; *Apodoglanis furnessi* = *Pterocryptis furnessi* 1070–1084; *Laticauda colubrina* 1139–1142.
Marquesas Is., *Cephalopholis urodeta, Epinephelus irroratus* 760–767.
Maryland, *Rana sylvatica* 209–221; *Scyliorhinus retifer* 231–234; *Agkistrodon contortrix mokasen* 777–786.
Massachusetts, *Clemmys insculpta* 836–838.
Mexico, *Gila* (*eremica* n. sp., *purpurea, ditaenia*) (Son.) 178–189; *Hybognathus* (*Dionda*) *punctifer* = *Dionda episcopa melanops* (Cuah.), *Hudsonius altus* = *Notropis celayensis* (Guan.) 225–227; *Cnemidophorus* (*tigris aethiops, t. gracilis*) (Son.) 800–809; *Heterostichus rostratus, Gibbonsia* (*elegans, metzi, montereyensis*) (Baja Cal.) 873–896; *Coralliozetus angelica* (Sin.) 969–978; *Lepidochelys kempi* 1129–1132; *Tomodactylus albolabris* = *Eleutherodactylus dixoni* (Guer.) 1138–1139.
Michigan, *Rana sylvatica* 209–221; *Coluber constrictor foxii* 897–909.
Mississippi, *Nerodia sipedon pleuralis* 243–245; *Hyla cinerea* 521–524; *Nerodia fasciata* 638–659; *Notropis longirostris* 736–744; *Crystallaria asprella* 927–936; *Ambystoma* (*maculatum, talpoideum*) 936–942.
Missouri, *Crystallaria asprella* 927–936; *Terrapene carolina triunguis* 1120–1123.
Montana, *Oncorhynchus mykiss* 44–49; *Ptychocheilus oregonensis* 819–834.
Namibia, *Lophius vomerinus* 787–800.
Nevada, *Bufo punctatus* 393–401; *Oncorhynchus* (*clarki, mykiss*) 854–859.
New Caledonia, *Plesiops insularis* n. sp. 373–387; *Lethrinus miniatus* 760–767.
New Jersey, *Notophthalmus viridescens, Enneacanthus obesus* 1–8; *Scyliorhinus retifer* 231–234; *Liparis inquilinus, Urophycis chuss* 1104–1109.
New Mexico, *Tiaroga cobitis* 29–38; *Cnemidophorus* (*tigris, marmoratus, tigris* × *marmoratus*) 622–637.
New York, *Scyliorhinus retifer* 231–234; *Agkistrodon contortrix mokasen* 777–786; *Caretta caretta, Lepidochelys kempi* 1136–1138.
New Zealand, *Aldrichetta forsteri* 9–16.
North Carolina, *Scyliorhinus retifer* 231–234; *Lepomis macrochirus, Rana clamitans* 234–239; *Lepomis macrochirus* 445–460; *Nerodia fasciata* 638–659.
Ohio, *Ambystoma* (*laterale-texanum, laterale-texanum-tigrinum*) 38–43; *Crystallaria asprella* 927–936.
Oklahoma, *Crotaphytus collaris* 105–110; *Cyprinella lutrensis* 842–845.
Oregon, *Oregonichthys* (*kalawatseti* n. sp., *crameri*) 277–293; *Ptychocheilus* (*oregonensis, umpquae*) 819–834; *Oncorhynchus* (*clarki, mykiss*) 854–859; *Chasmistes brevirostris, Gila b. bicolor, Catostomus snyderi* 1109–1111.
Pacific Ocean, *Myroconger* (*gracilis* n. sp., *compressus*) (NW) 148–150; *Lachneratus* n. gen. *phasmaticus* n. sp., *Rhabdamia,* Apogoninae (17 other genera) (W) 718–722; *Apristurus* (*herklotsi, longicephalus*) 992–1002; *Emoia* (*cyanura, impar*) (islands of Oceania) 1132–1136.
Pakistan, *Filimanus similis* n. sp. 302–322.
Palau Is., *Plesiops gracilis* n. sp. 373–387.
Panama, *Physalaemus pustulosus* 460–470.
Papua-New Guinea, *Filimanus* (*heptadactyla, sealei*) 302–322; *Plesiops gracilis* n. sp. 373–387.
Peru, *Bufo corynetes* n. sp. 137–141; *Eknomoliparis* n. gen. *chirichignoae* n. sp. 358–373.
Philippine Is., *Filimanus sealei* 302–322; *Plesiops gracilis* n. sp. 373–387.
Puerto Rico, *Eleutherodactylus coqui* 1013–1024; *Myxine mcmillanae* n. sp. 1040–1043.
Red Sea, *Pterois miles, Fistularia commersonii* 230–231.
Solomen Is., *Filimanus sealei* 302–322.
South Africa, *Lophius vomerinus* 787–800.
South Carolina, *Nerodia fasciata* 638–659; *Acipenser brevirostrum* 695–702; *Ambystoma* (*maculatum, talpoideum*) 936–942; *Alligator mississippiensis* 1123–1129.
South China Sea, *Apristurus herklotsi* 992–1002.
Spain, *Lophius* (*piscatorius, budegassa*) 787–800; *Blanus cinereus* 1142–1146.
Sri Lanka, *Filimanus similis* n. sp. 302–322.
Tahiti, *Albula glossodonta, Callechelys catastomus, Kuhlia mugil* 760–767.
Tennessee, *Etheostoma* (*Catonotus*) sp. 471–485; *Agkistrodon piscivorus leucostoma* 838–841.
Texas, *Nerodia fasciata* 638–659; *Lepophidium* (*brevibarbe, jeannae*), *Ophidion* (*welshi, grayi*) 703–710; *Pseudacris clarkii* 1032–1039.
Thailand, *Filimanus* (*similis* n. sp., *heptadactyla, xanthonema*) 302–322; *Gekko* (*taylori* n. sp., *gecko, monarchus, petricolus, smithii*) 503–509; *Acantopsis dialuzona* 910–915.
Tonga, *Lethrinus miniatus* 760–767.
Utah, *Ptychocheilus lucius* 819–834.
Vanuatu, *Andamia amphibius* 760–767.
Venezuela, *Pseudocetopsis* (*praecox* n. sp., *orinoco*) 161–165; *Gladioglanis machadoi* 190–209; *Rivulus immaculatus* n. sp. 323–328.
Virgin Is., U.S., *Myxine mcmillanae* n. sp. 1040–1043.
Virginia, *Ambystoma maculatum* 132–137; *Rana sylvatica* 209–221; *Scyliorhinus retifer* 231–234; *Luxilus* (*albeolus, cornutus, cerasinus, cornutus* × *cerasinus*) 979–991.
Wyoming, *Rhinichthys osculus* (*o. thermalis, o. yarrowi*) 227–229; *Ptychocheilus lucius* 1091–1092.

Zaire, *Ctenopoma* (*milleri* n. sp., *lineatum, nanum, intermedium, ansorgei*) 166–178.
Zambia, *Serranochromis* (*altus* n. sp., *angusticeps*) 675–686.
GROWTH, *Tiaroga cobitis* (in nature) 29–38; *Ambystoma maculatum* (larval growth rates rel. to acid & anion toxic.) 132–137; *Rana sylvatica* (geogr. var. in larv. growth rel. to select. pressures) 209–221; *Lepomis macrochirus* (allometry, compar. of methods of meas.) 347–357; *Etheostoma* (*Catonotus*) sp. (from hatchl., in wild, endang. sp.) 471–485; *Ambystoma barbouri* (of larv., rel. to hab.) 687–694; *Lepophidium brevibarbe, Ophidion welshi* (spp. compar.) 703–710; *Ctenotus* (*brooksi, helenae, leonhardii, pantherinus, piankai, quattuordecimlineatus, schomburgkii*) (rates, syntopic skinks) 744–760; *Lepidogalaxias salamandroides* (rates in juvs., max. size of ads.) 845–850; *Coluber constrictor foxii* (6-yr study in wild) 897–909; *Mabuya bistriata* (rates in wild) 916–927; *Sternotherus minor* (rates in wild, rel. to statist. models) 954–968; *Pseudacris clarkii* (rates rel. to heterozyg. in larv., allozyme data) 1032–1039; *Alligator mississippiensis* (rates in wild juvs., compar. to other popns., seas. var.) 1123–1129.

HABITAT, *Tiaroga cobitis* (microhab.: larv., juv., ad.) 29–38; *Cerberus rynchops, Fordonia leucobalia, Myron richardsoni, Enhydris polylepis, Stegonotus cucullatus, Dendrelaphis* (*calligastra, punctulata*), *Boiga irregularis, Tropidonophis mairii* (Australian Colubrids) 120–131; *Bufo corynetes* n. sp. 137–141; *Hypopomus pinnicaudatus* n. sp. 151–161; *Gladioglanis conquistador* n. sp. 190–209; *Scyliorhinus retifer* 231–234; *Oregonichthys* (*kalawatseti* n. sp., *crameri*) 277–293; *Rivulus immaculatus* n. sp. 323–328; *Bolinia* n. gen. *euryptera* n. sp. (depth) 329–339; *Plesiops* (*gracilis* n. sp., *insularis* n. sp., *genaricus* n. sp.) 373–387; *Priolepis* (*robinsi* n. sp., *hipoliti*) 387–392; *Etheostoma* (*Catonotus*) sp. (endang. sp.) 471–485; *Urosaurus ornatus* (hab. diffs. correl. with freq. diffs. in color polymorph.) 493–503; Snakes (21 spp.) (seas. spp. divers. of snakes in diff. habs.) 517–521; *Hyla cinerea* (microhab. of calling sites) 521–524; *Gasterosteus aculeatus* (herit. of life hist. traits, gen. anal., rel. to hab.) 526–529; *Neodia* (*f. fasciata, f. confluens, f. pictiventris, f. clarkii, f. compressicauda, f. taeniata*) (strong hab. diffs. & allozyme evid. to divide *N. fasciata* into 2 spp.) 638–659; *Serranochromis* (*altus* n. sp., *angusticeps*) 675–686; *Ambystoma barbouri* (rel. to egg depos., larv. growth & surv.) 687–694; *Acipenser brevirostrum* (seas. changes, juvs. & ads., telemetry) 695–702; *Lepophidium* (*brevibarbe, jeannae*), *Ophidion* (*welshi, grayi*) (depth) 703–710; *Dendrobates pumilio* (rel. to myrmecophagy) 723–730; *Notropis longirostris* (correl. life hist. traits & hab.) 736–744; *Cnemidophorus* (*tigris aethiops, t. gracilis*) (intergrad. in ecotone) 800–809; *Cottus* (*pitensis, klamathensis macrops, asperrimus*) (microhab. choice in artif. stream) 810–819; *Heterostichus rostratus, Gibbonsia* (*elegans, metzi, montereyensis, erythra* = *montereyensis, norae* = *montereyensis*) (sex. dimorph. & interpopn. diffs. in depth) 873–896; *Mabuya bistriata* (microhab.) 916–927; *Ameiva ameiva* (strongly aff. reprod.) 1002–1012; *Myxine mcmillanae* n. sp. 1040–1043; *Eulamprus quoyii* (anal. microhab. diffs. btwn. juvs. & ads.) 1117–1120; *Blanus cinereus* (microhab.) 1142–1146.
HIBERNATION, *Clemmys insculpta* (winter squat. oxy. uptake in wild) 836–838; *Coluber constrictor foxii* (body temps. in wild) 897–909.
HISTOLOGY, *Ambystoma* (*laterale-texanum, laterale-texanum-tigrinum*) (unisex. ploidy mosaics rare) 38–43; *Etheostoma* (*flabellare, neopterum, olmstedi*) (fin knobs) 80–86; Squamata (8 spp.), Chelonia (4 spp.), Anura (11 spp.) (cilia in bladder stalk of terrestr. herps) 711–717.
HOME RANGE, *Dendrobates pumilio* (territ. rel. to myrmecophagy) 723–730; *Coluber constrictor foxii* (6-yr study in wild) 897–909; *Terrapene carolina triunguis* (over 25 yr) 1120–1123; *Laticauda colubrina* (est. based on mark-recapt.) 1139–1142.
HYBRIDIZATION, *Ambystoma* (*laterale-texanum, laterale-texanum-tigrinum*) (ploidy consistency in unisexs.) 38–43; *Ambystoma* (*laterale, laterale-jeffersonianum*) (genets. of unisex.-bisex. hybrid popns.) 87–105; *Geocrinia* (*laevis, victoriana*) (genets. [allozyme data] of stable hybrid zone) 593–602; *Cnemidophorus* (*tigris, marmoratus, tigris* × *marmoratus*) (genets. of hybrid zone, allozyme & morph. data) 622–637; *Cnemidophorus* (*tigris aethiops, t. gracilis*) (intergr. in ecotone) 800–809; *Oncorhynchus* (*clarki, mykiss*) (introgress. of native & introd. trout) 854–859; *Luxilus* (*albeolus, cornutus, cerasinus, cornutus* × *cerasinus*) (genet. anal. hybrid, allozyme, mtDNA, scale count charcs.) 979–991; *Liolaemus m. monticola* (btwn. popns. with diff. karyotypes) 1044–1059; *Gambusia* (*affinis, holbrooki*) (possib. hybrids, morph. & allozyme data) 1111–1116.

IMMUNOLOGY, *Dasyatis americana, Carcharhinus plumbeus, Rhizoprionodon porosus* (human white cell resp. to elasmobr. immune factors, evol. signif.) 402–408; Agamidae (37 spp.), Chamaeleonidae (2 spp.), Iguanidae (4 spp.) (clad. anal. agamid phylog. based on serum alb. immun. dist.) 616–622.

LARVAE, *Aldrichetta forsteri* (ontog. of fins & aggreg. beh.) 9–16; *Tiaroga cobitis* (microhab., age) 29–38; *Rana sylvatica* (geogr. var. in larv. dev. rel. to select. pressures) 209–221; *Rana catesbeiana* (drag forces on tdpl. swimming) 252–257; *Oregonichthys crameri* (dev.) 277–293; *Etheostoma* (*Catonotus*) sp. (dev., endang. sp.) 471–485; *Ambystoma barbouri* (growth, surv., dispersal, rel. to macrohab.) 687–694; *Ambystoma tigrinum* (no change in hindlimb muscles at metamorph.) 767–776; *Heterostichus*

rostratus, Gibbonsia (*elegans, metzi, montereyensis, erythra* = *montereyensis, norae* = *montereyensis*) (long pelagic lar. stage explains gene flow btwn. disjunct popns.) 873–896; *Ambystoma* (*maculatum, talpoideum*) (interspp. aggress. in lab) 936–942; *Pseudacris clarkii* (rel. of heterozyg. to some dev. traits, allozyme data) 1032–1039.

LATERAL LINE, *Bolinia* n. gen. *euryptera* n. sp. (descript., compar. to rels.) 329–339.

LIFE HISTORY, *Aldrichetta forsteri* (early) 9–16; *Tiaroga cobitis* 29–38; *Oregonichthys* (*kalawatseti* n. sp., *crameri*) (repro., diet, hab., larv. dev.) 277–293; *Mugil platanus* (loc. & seas. of life stages) 409–418; *Etheostoma* (*Catonotus*) sp. (endang. sp.) 471–485; *Gasterosteus aculeatus* (herit. of life hist. traits, genet. anal., rel. to theories of select.) 526–529; Urodela (5 fams., 123 spp.), Anura (8 fams., 66 spp.) (genet. divers. [allozyme data] rel. to ecol. & life hist. factors) 565–592; *Lepophidium* (*brevibarbe, jeannae*), *Ophidion* (*welshi, grayi*) (spp. compar.) 703–710; *Notropis longirostris* (interpopn. diffs. point to select. forces) 736–744; *Ctenotus* (*brooksi, helenae, leonhardii, pantherinus, piankai, quattuordecimlineatus, schomburgkii*) (ecol. correls., life hist. traits, syntopic skinks) 744–760; *Coluber constrictor foxii* (6-yr study, bet-hedging hypoth. explains some diffs. from other popns.) 897–909; *Mabuya bistriata* (viviparous lizard) 916–927; *Ameiva ameiva* (life hist. traits vary with environ. in tropics) 1002–1012; *Pseudacris clarkii* (rel. of heterozyg. to some dev. traits in larv., allozyme data) 1032–1039.

LIGHT, *Crotaphytus collaris* (photoper. & position determ. beh. thermoreg.) 105–110; *Caretta caretta, Chelonia mydas* (color & intens. aff. hatchl. orient.) 1060–1069; *Micropterus salmoides* (photoper. aff. swimming speed at cold temps. only) 1085–1090.

LOCOMOTION, *Rana catesbeiana* (drag forces in tdpl. swimming, most drag at metamorph.) 252–257; *Ambystoma tigrinum* (no change in hindlimb muscles at metamorph.) 767–776; *Micropterus salmoides* (photoper. aff. swimming speed) 1085–1090.

METHODS, *Lepomis macrochirus* (compar. diff. methods of morphomet. anal.) 347–357; *Agkistrodon contortrix mokasen* (snake serum factor neutralizes venom) 777–786; Elasmobranchs (contrast radiography to study vascular systems) 850–854; *Negaprion brevirostris* (heart rate [telemetry] to meas. metab. rate) 942–953; *Sternotherus minor* (est. age from size) 954–968; Fishes (to compare vol. of non-spherical with spherical eggs) 1092–1098.

MIGRATION, *Mugil* (*platanus, curema, gaimardianus*) (of juvs. into estuary) 409–418; *Gambusia affinis* (coloniz. success rel. to mult. insemin.) 434–444; *Mugil cephalus* (gene flow btwn. popns., allozyme evid.) 485–492; *Campostoma anomalum, Catostomus commersoni, Cyprinella lutrensis, Fundulus zebrinus, Hybopsis gracilis, Ictalurus* (*melas, punctatus*), *Lepomis cyanellus, Notropis stramineus, Pimephales promelas, Rhinichthys cataractae* (coloniz. in fish communs., tribs. with var. flow) 659–674; *Ambystoma barbouri* (instream dispers. of larv.) 687–694; *Acipenser brevirostrum* (upriver spawning migrs. & other mvmnts., telemetry) 695–702.

MIMICRY, *Etheostoma* (*flabellare, neopterum, olmstedi*) (fin knobs mimic eggs) 80–86; *Bothrops* (*jararaca, jararacussu*) (caudal luring [insect larv. mimic] in juvs.) 245–248; *Etheostoma* (*Catonotus*) sp. (fin knobs mimic eggs, endang. sp.) 471–485; *Lialis burtonis* (tail-luring [insect larv. mimic] in prey capture) 509–516.

MITOCHONDRIAL DNA, *Crocodylus* (12 spp.), *Osteolaemus, Tomistoma, Gavialis, Alligator, Caiman* (clad. anal. using mtDNA & nucl. rDNA) 602–615; *Cyprinella lutrensis* (anal. of mtDNA length increase in one individ.) 842–845; *Luxilus* (*albeolus, cornutus, cerasinus, cornutus* × *cerasinus*) (anal. hybrid) 979–991.

MORPHOLOGY, *Aldrichetta forsteri* (ontog. of fins) 9–16; *Oncorhynchus mykiss* (rearing dens. aff. # verteb. & rays, morph. asymm.) 44–49; *Etheostoma* (*flabellare, neopterum, olmstedi*) (fin knobs, struct. & funct.) 80–86; *Gladioglanis* (*conquistador* n. sp., *machadoi*), Rhamdiinae, Pseudopimelodinae n. subfam. (osteol., clad. anal.) 190–209; *Bolinia* n. gen. *euryptera* n. sp. (osteol.) 329–339; *Lepomis macrochirus* (compar. diff. methods of morphomet. anal.) 347–357; *Careproctus* (*pallidus, falklandica, crassus*), *Eknomoliparis* n. gen. *chirichignoae* n. sp., *Liparis antarctica, Paraliparis* (*anarthractae, debueni, molinae* n. sp., *merodontus* n. sp., *eltanini*, sp.) (osteol. Liparidae in Chile) 358–373; *Physalaemus pustulosus* (voc. sac anat. & physics of calling) 460–470; *Ambystoma tigrinum* (hindlimb muscles across metamorph.) 767–776; *Oneirodes* (*epithales* n. sp., *alius*, 32 other spp.) (of esca, illustr. for each sp.) 1024–1031.

NESTING, *Leptodactylus knudseni* (foam nests, repro. success strongly tied to rainfall pattn.) 248–252; *Etheostoma* (*Catonotus*) sp. (male guarding, endang. sp.) 471–485.

NOMENCLATURE, *Ctenopoma lineatum, Anabas davidae* = *C. ansorgei* (resurrect & redescribe *C. lineatum*, synon. *A. davidae*) 166–178; *Trichomycterus* (*itatiayae, brasiliensis, immaculatus*) (revalid. of *T. itatiayae*, design. types, compar. to rels.) 222–224; *Platystacus verrucosus* = *Bunocephalus verrucosus* (design. type sp. of *Bunocephalus* & nomen. changes resulting) 224–225; *Hybognathus* (*Dionda*) *punctifer* = *Dionda episcopa melanops, Hudsonius altus* = *Notropis celayensis* (synon.) 225–227; *Nerodia sipedon pleuralis* (design. lectotype & type local.) 243–245; *Albula glossodonta, Callechelys catastomus, Cephalopholis urodeta, Epinephelus irroratus, Kuhlia mugil, Lethrinus miniatus, Andamia amphibius* (reident. fishes from 1772–75 voyage of HMS Resolution) 760–767; *Heterostichus rostratus, Gib-*

bonsia (*elegans, metzi, montereyensis, erythra* = *montereyensis, norae* = *montereyensis*) (synon. 2 spp., allozyme & morph. data) 873–896; *Apristurus* (*herklotsi, longicephalus*) (synon. 5 spp. [*A. abbreviatus, xenolepis, brevicaudatus, longianalis, longicaudatus*] with *A. herklotsi*) 992–1002; *Apodoglanis furnessi* = *Pterocryptis furnessi, Pterocryptis* (11 other spp.), *Silurichthys* (6 spp.) (reclass., redescript., rediagn.) 1070–1084; *Emoia* (*cyanura, impar*) (nomencl. hist., design. of spp. names) 1132–1136; *Eleutherodactylus atkinsi orientalis* = *a. estradai, Tomodactylus albolabris* = *E. dixoni, E. petersi* = *petersorum* (replcmt. names for 3 preocc. names) 1138–1139.

PARASITES, *Etheostoma* (*Catonotus*) sp. (of endang. sp.) 471–485.

PHEROMONES, *Lepomis macrochirus, Rana clamitans* (chem.-mediated avoid. of vertebrate preds. & compets. by insects) 234–239.

PHYSIOLOGY, *Bufo punctatus* (water absorp. response, beh. pattns. & physiol. correls.) 393–401; *Clemmys insculpta* (winter aquat. oxy. uptake in wild) 836–838; *Negaprion brevirostris* (heart rate rel. to met. rate) 942–953; *Micropterus salmoides* (photoper. aff. ability to swim fast) 1085–1090; *Chasmistes brevirostris, Gila b. bicolor, Catostomus snyderi* (sp. diff. in toler. of high pH, aff. abund. of *C. brevirostris*) 1109–1111; *Caretta caretta, Lepidochelys kempi* (Rathke's gland, possib. excret. funct.) 1129–1132; *Caretta caretta, Lepidochelys kempi* (ann. cold-stunning of juvs., Long Is. Sound) 1136–1138.

POPULATIONS, *Tiaroga cobitis* (age struct.) 29–38; *Etheostoma* (*Catonotus*) sp. (popn. struct., dens., repro. seas., fec., endang. sp.) 471–485; *Mugil cephalus* (gene flow btwn. popns., allozyme evid.) 485–492; *Urosaurus ornatus* (diff. freq. & correls. of color polymorph. in 2 popns.) 493–503; *Gasterosteus aculeatus* (genet. compar. btwn. popns. of herit. of life hist. traits) 526–529; *Notropis longirostris* (interpopn. life hist. diffs. point to select. forces) 736–744; *Lepidogalaxias salamandroides* (popn. age-sex size struct., seas. var.) 845–850; *Heterostichus rostratus, Gibbonsia* (*elegans, metzi, montereyensis, erythra* = *montereyensis, norae* = *montereyensis*) (genet. & ecophenotype diffs., gene flow btwn. disjunct popns.) 873–896; *Ameiva ameiva* (reprod. ecol. var. with habitat) 1002–1012; *Liolaemus m. monticola* (kar. var. w/in & btwn. popns.) 1044–1059; *Terrapene carolina triunguis* (age-sex classes, death rates, 25-yr study) 1120–1123; *Alligator mississippiensis* (growth rates in wild juvs., compar. to other popns.) 1123–1129; *Laticauda colubrina* (popn. size est., indiv. mvmnts., gender diffs.) 1139–1142.

PREDATION, *Notophthalmus viridescens, Enneacanthus obesus* (interspp. compet.) 1–8; *Pterois miles, Fistularia commersonii* (fish pred. of highly toxic fish) 230–231; *Lepomis macrochirus* (chem.-mediated fish pred. avoid. by insects) 234–239; *Bothrops* (*jararaca, jararacussu*) (caudal luring in juvs.) 245–248; *Lialis burtonis* (tail-luring) 509–516; *Campostoma anomalum, Catostomus commersoni, Cyprinella lutrensis, Fundulus zebrinus, Hybopsis gracilis, Ictalurus* (*melas, punctatus*), *Lepomis cyanellus, Notropis stramineus, Pimephales promelas, Rhinichthys cataractae* (poss. aff. on fish communs. in tribs. with var. flow) 659–674; *Dendrobates pumilio* (age-sex class & seas. var. in myrmecophagy, pred. rates, prey avail.) 723–730; *Gasterosteus aculeatus* (evol. of lg. size as pred. defense) 1098–1104.

RATHKE'S GLAND, *Caretta caretta, Lepidochelys kempi* (vol. & compos. secr. in hatchls., evid. of ad. secr.) 1129–1132.

REPRODUCTION, *Tiaroga cobitis* (seas., hab., fecund., gonad dev.) 29–38; *Etheostoma* (*flabellare, neopterum, olmstedi*) (fin knobs are egg mimics) 80–86; *Ambystoma* (*laterale, laterale-jeffersonianum*) (breeding in bisex.-unisex. hybrid popns.) 87–105; *Cerberus rynchops, Fordonia leucobalia, Myron richardsoni, Enhydris polylepis, Stegonotus cuculatus, Dendrelaphis* (*calligastra, punctulata*), *Boiga irregularis, Tropidonophis mairii* (seas., fec.) 120–131; *Pseudotropheus pursus* n. sp. (seas.) 141–147; *Leptodactylus knudseni* (success strongly tied to rainfall pattn.) 248–252; *Oregonichthys* (*kalawatseti* n. sp., *crameri*) (beh. in lab, seas., hab. diff. btwn. spp.) 277–293; Colubridae (16 spp.), Elapidae (1 sp.), Viperidae (3 spp.) (seas.) 294–302; *Raja erinacea* (mineral depos. in egg capsules) 339–347; *Etheostoma rafinesquei* (annual fec., spawning periodic.) 419–433; *Gambusia affinis* (mult. insemin., advant. for coloniz.) 434–444; *Etheostoma* (*Catonotus*) sp. (seas., clutch size & freq., fec., beh., endang. sp.) 471–485; *Campostoma anomalum, Catostomus commersoni, Cyprinella lutrensis, Fundulus zebrinus, Hybopsis gracilis, Ictalurus* (*melas, punctatus*), *Lepomis cyanellus, Notropis stramineus, Pimephales promelas, Rhinichthys cataractae* (adapt. to floods) 659–674; *Serranochromis* (*altus* n. sp., *angusticeps*) (seas., mouth brooding) 675–686; *Ambystoma barbouri* (macrohab. choice in egg depos.) 687–694; *Acipenser brevirostrum* (spawning hab.) 695–702; *Lepophidium* (*brevibarbe, jeannae*), *Ophidion* (*welshi, grayi*) (spawning periods) 703–710; *Gambusia holbrooki* (factors in mate choice, compar. to *G. affinis*) 730–735; *Notropis longirostris* (egg size rel. to stream flow) 736–744; *Ctenotus* (*brooksi, helenae, leonhardii, pantherinus, piankai, quattuordecimlineatus, schomburgkii*) (seas. & ann. var., repro. cycles, syntopic skinks) 744–760; *Triturus v. vulgaris* (size choice of mates) 835–836; *Coluber constrictor foxii* (seas., clutch size, fecund.) 897–909; *Mabuya bistriata* (viviparous, lizard anat. & histol. of placenta, seas., clutch size) 916–927; *Sternotherus minor* (size at sex. matur., sex diffs.) 954–968; *Ameiva ameiva* (rel. to ecol.) 1002–1012;

Fishes (method for comparing vol. of non-spherical with spherical eggs) 1092–1098.

RESPIRATION, Eleotridae (3 gen., 5 spp.), Gobiidae (11 gen., 15 spp.) (aquat. surface resp.) 17–28; *Hypopomus pinnicaudatus* n. sp. (air-breathing) 151–161; *Alligator mississippiensis* (respir. restrict. of eggs not aff. sex ratio) 240–243; *Clemmys insculpta* (winter aquat. oxy. uptake in wild) 836–838.

SALINITY, *Mugil* (*platanus, curema, gaimardianus*) (changes aff. seas. estuarine distr. of juvs.) 409–418; *Nerodia* (*f. fasciata, f. confluens, f. pictiventris, f. clarkii, f. compressicauda, f. taeniata*) (allozyme evid. that saline-adapted subspp. are separate sp.) 638–659; *Acipenser brevirostrum* (seas. distr. juvs. & ads. in diff. sals.) 695–702.

SEX, *Tiaroga cobitis* (ratio) 29–38; *Ambystoma* (*lateraletexanum, laterale-texanum-tigrinum*) (unisex. ploidy consistency) 38–43; U.S. turtles (7 fams., 33 spp.) (temp.-depend. determ.) 50–69; *Ambystoma* (*laterale, laterale-jeffersonianum*) (ratio in bisex.-unisex. hybrid popns.) 87–105; *Alligator mississippiensis* (determ. not aff. by respir. restrict. in eggs) 240–243; *Lepophidium* (*brevibarbe, jeannae*), *Ophidion* (*welshi, grayi*) (ratios) 703–710; *Dendrobates pumilio* (gender var. in feeding rates, myrmecophagy) 723–730; *Ctenotus* (*brooksi, helenae, leonhardii, pantherinus, piankai, quattuordecimlineatus, schomburgkii*) (ratio, syntopic skinks) 744–760; *Coluber constrictor foxii* (ratio, var. with age) 897–909; *Laticauda colubrina* (ratios of amphib. sea snakes on land) 1139–1142.

SEXUAL DIMORPHISM, *Ctenopoma* (*milleri* n. sp., *lineatum*) (rel. to bubble-nesting) 166–178; *Lepomis macrochirus* (growth allometry, methods of meas. compar.) 347–357; *Priolepis robinsi* n. sp. (gen. papilla & size) 387–392; *Etheostoma* (*Catonotus*) sp. (only during breeding, endang. sp.) 471–485; *Urosaurus ornatus* (male color polymorph.) 493–503; *Lepophidium brevibarbe* (size) 703–710; *Ctenotus* (*brooksi, helenae, leonhardii, pantherinus, piankai, quattuordecimlineatus, schomburgkii*) (in syntopic skinks) 744–760; *Heterostichus rostratus, Gibbonsia* (*elegans, metzi, montereyensis, erythra* = *montereyensis, norae* = *montereyensis*) (by depth, confounded previous nomencl.) 873–896; *Mabuya bistriata* (females larger) 916–927; *Sternotherus minor* (in age at sex. matur.) 954–968; *Coralliozetus angelica* (ontogen. of strong sex. dimorph.) 969–978; *Eleutherodactylus coqui* (in aggress. defense calls) 1013–1024.

SIZE, *Cerberus rynchops, Fordonia leucobalia, Myron richardsoni, Enhydris polylepis, Stegonotus cuculatus, Dendrelaphis* (*calligastra, punctulata*), *Boiga irregularis, Tropidonophis mairii* (Australian Colubrids) 120–131; *Rana sylvatica* (geogr. var. in opt. size at metamorph.) 209–221; *Scyliorhinus retifer* (at matur.) 231–234; *Mugil* (*platanus, curema, gaimardianus*) (juv. size class abund. & distr. in estuary) 409–418; *Gambusia holbrooki* (mate choice of females rel. to male size) 730–735; *Notropis longirostris* (egg size rel. to stream flow) 736–744; *Ctenotus* (*brooksi, helenae, leonhardii, pantherinus, piankai, quattuordecimlineatus, schomburgkii*) (at matur., ann. var., syntopic skinks) 744–760; *Triturus v. vulgaris* (size choice of mates) 835–836; *Coluber constrictor foxii* (body size compar. across geogr. distr., rel. to bet-hedging theory) 897–909; *Mabuya bistriata* (females larger) 916–927; *Ambystoma* (*maculatum, talpoideum*) (determ. outcome of interspp. aggress., larvae) 936–942; *Sternotherus minor* (at sex. matur.) 954–968; Fishes (method for determ. size of non-spherical eggs) 1092–1098; *Gasterosteus aculeatus* (as defense against pred.) 1098–1104; *Alligator mississippiensis* (aff. growth rates in wild juvs.) 1123–1129.

SURVIVAL, *Etheostoma* (*Catonotus*) sp. (survshp. curves, endang. sp.) 471–485; *Ambystoma barbouri* (of larv. in diff. macrohabs.) 687–694; *Coluber constrictor foxii* (survshp. of adults in wild, 6-yr study) 897–909; *Terrapene carolina triunguis* (survshp. over 25 yr) 1120–1123.

SYMBIOSIS, *Liparis inquilinus, Urophycis chuss* (seas. spp. diffs. in use of same host as shelter by juvs., commensalism) 1104–1109.

SYSTEMATICS, *Bufo* (*corynetes* n. sp., *variegatus*) 137–141; *Pseudotropheus* (*pursus* n. sp., *lanisticola, livingstonii*) 141–147; *Myroconger* (*gracilis* n. sp., *compressus*) 148–150; *Hypopomus* (*pinnicaudatus* n. sp., *beebei, artedi, mulleri, brevirostris, diazi, occidentalis*) 151–161; *Pseudocetopsis* (*praecox* n. sp., *orinoco*) 161–165; *Ctenopoma* (*milleri* n. sp., *lineatum, nanum, intermedium, ansorgei*) (phylogen. rels.) 166–178; *Gila* (*eremica* n. sp., *purpurea, ditaenia*) 178–189; *Gladioglanis* (*conquistador* n. sp., *machadoi*), Rhamdiinae, Pseudopimelodinae n. subfam. (clad. anal., rediagnose genus, diagnose subfam., new subfam.) 190–209; *Rhinichthys osculus* (*o. thermalis, o. yarrowi*) (valid. of subspp.) 227–229; *Oregonichthys* (*kalawatseti* n. sp., *crameri*) (clad. anal., allopatr. spp., allozymes) 277–293; *Filimanus* (*perplexa* n. sp., *similis* n. sp., *heptadactyla, hexanema, sealei, xanthonema*) (revise genus, key) 302–322; *Rivulus immaculatus* n. sp. (clad. anal. compar. to some congeners) 323–328; *Bolinia* n. gen. *euryptera* n. sp. (clad. anal., compar. to Artediellinae & *Myoxocephalus* group) 329–339; *Careproctus* (*pallidus, falklandica, crassus*), *Eknomoliparis* n. gen. *chirichignoae* n. sp., *Liparis antarctica, Paraliparis* (*anarthractae, debueni, molinae* n. sp., *merodontus* n. sp., *eltanini*, sp.) (review Liparidae in Chile, key) 358–373; *Plesiops* (*gracilis* n. sp., *insularis* n. sp., *genaricus* n. sp.) 373–387; *Priolepis* (*robinsi* n. sp., *dawsoni, hipoliti*) (key to spp.) 387–392; *Mugil* (*platanus, curema, gaimardianus*) (key to juvs.) 409–418; *Gekko* (*taylori* n. sp., *gecko, monarchus, petricolus, smithii*) (key to Thai spp. of *Gekko*) 503–509; *Crocodylus* (12 spp.), *Osteolaemus, Tomistoma, Gavialis, Alligator, Caiman* (clad. anal. using mtDNA & nucl. rDNA) 602–615; Agamidae (37 spp.),

Chamaeleonidae (2 spp.), Iguanidae (4 spp.) (clad. anal. agamid phylog. based on serum alb. immun. dist.) 616–622; *Cnemidophorus* (*tigris, marmoratus, tigris* × *marmoratus*) (interpret. of hybrid zone genets., allozyme & morph. data) 622–637; *Nerodia* (*f. fasciata, f. confluens, f. pictiventris, f. clarkii, f. compressicauda, f. taeniata*) (allozyme & ecol. evid. to divide *N. fasciata* into 2 spp., clad. anal.) 638–659; *Serranochromis* (*altus* n. sp., *angusticeps*) (sister spp.) 675–686; *Lachneratus* n. gen. *phasmaticus* n. sp., *Rhabdamia*, Apogoninae (17 other genera) (key, extern. charcs.) 718–722; *Lophius* (*vomerinus, piscatorius, budegassa*) (redescribe *L. vomerinus*, compar. spp., morph. & allozyme data) 787–800; *Mylopharodon conocephalus, Ptychocheilus* (*grandis, lucius, oregonensis, umpquae*) (phylogen. anal., key to spp. of *Ptychocheilus*) 819–834; *Heterostichus rostratus, Gibbonsia* (*elegans, metzi, montereyensis, erythra* = *montereyensis, norae* = *montereyensis*) (phylogen. anal., evid. of gene flow, clinal trends, allozyme & morph. data, key to spp.) 873–896; *Acantopsis* (*octoactinotos* n. sp., *dialuzona*) 910–915; *Crystallaria asprella, Percina, Etheostoma* (raise *C.* to generic status, phylogen. anal., sister group design., morph. charcs.) 927–936; *Apristurus* (*herklotsi, longicephalus*) (synon. 5 spp. [*A. abbreviatus, xenolepis, brevicaudatus, longianalis, longicaudatus*] with *A. herklotsi*, rev. part of genus, key to spp.) 992–1002; *Oneirodes* (*epithales* n. sp., *alius*, 32 other spp.) (key to spp.) 1024–1031; *Myxine* (*mcmillanae* n. sp., *ios*) 1040–1043; *Apodoglanis furnessi* = *Pterocryptis furnessi, Pterocryptis* (11 other spp.), *Silurichthys* (6 spp.) (phylogen. anal.) 1070–1084.

TEMPERATURE, U.S. turtles (7 fams., 33 spp.) (temp.-depend. sex determ.) 50–69; *Crotaphytus collaris* (photoper. & light source position determ. beh. thermoreg.) 105–110; *Rana sylvatica* (seas. timing in rel. to geogr. var. in larv. dev.) 209–221; *Rhinichthys osculus* (*o. thermalis, o. yarrowi*) (subsp. diffs. not temp.-rel.) 227–229; *Leptodactylus knudseni* (of foam nests var. little, repro. success strongly tied to rainfall pattn.) 248–252; *Mugil* (*platanus, curema, gaimardianus*) (aff. seas. estuarine distr. of juvs.) 409–418; *Etheostoma rafinesquei* (spawning aff. by max. stream temp.) 419–433; *Heterostichus rostratus, Gibbonsia* (*elegans, metzi, montereyensis, erythra* = *montereyensis, norae* = *montereyensis*) (warm- & cold-water spp., temp.-rel. cline) 873–896; *Coluber constrictor foxii* (body temp. in wild) 897–909; *Mabuya bistriata* (cloacal & environ.) 916–927; *Micropterus salmoides* (photoper. aff. swimming speed at cold temps. only) 1085–1090; *Eulamprus quoyii* (preferred body temp., rel. to microhab.) 1117–1120; *Caretta caretta, Lepidochelys kempi* (ann. cold-stunning of juvs., Long Island Sound) 1136–1138.

TOXICITY, *Cnemidophorus arubensis* (diet rel. to toxic cmpnds. in food plants) 111–119; *Ambystoma maculatum* (anions important in acid toxic.) 132–137; *Pterois miles, Fistularia commersonii* (pred. on highly toxic fish) 230–231; *Agkistrodon contortrix mokasen* (serum fraction neutralizes venom) 777–786; *Chasmistes brevirostris, Gila b. bicolor, Catostomus snyderi* (raised pH levels in lake kill some fish) 1109–1111.

TRUSS ANALYSIS, *Lepomis macrochirus* (compar. to other methods of morphomet. anal.) 347–357; *Mylopharodon conocephalus, Ptychocheilus* (*grandis, lucius, oregonensis, umpquae*) (data for phylogen. anal.) 819–834; *Coralliozetus angelica* (of ontogen. of sex. dimorph.) 969–978.

URINARY BLADDER, Squamata (8 spp.), Chelonia (4 spp.), Anura (11 spp.) (cilia in bladder stalk of terrestr. herps) 711–717.

VARIATION, *Rana sylvatica* (geogr. var. in larv. dev. rel. to select. pressures) 209–221; *Lepomis macrochirus* (morph. var., compar. diff. methods of anal.) 347–357; Urodela (5 fams., 123 spp.), Anura (8 fams., 66 spp.) (genet. divers. [allozyme data] rel. to ecol. & life hist. factors) 565–592; *Liolaemus m. monticola* (karyo. var. w/in & btwn. popns.) 1044–1059.

VENOM, *Agkistrodon contortrix mokasen* (serum fraction neutralizes venom hemorrhage) 777–786.

VISION, *Caretta caretta, Chelonia mydas* (sensitiv. to color & light intens. in hatchls.) 1060–1069.

WATER BALANCE, *Bufo punctatus* (dermal water absorp. beh.) 393–401.